AMENDMENTS TO THE CLAIMS

Please incorporate the following amendments to the subject application.

In the Claims:

1. (**Currently amended**) A CpG unstructured nucleic acid (UNA) oligonucleotide **containing at least one UNA nucleotide and which hybridizes under stringent hybridization conditions to a discrete region of a genome that contains a CpG that is, or is predicted to be, a target for a cellular methyltransferase**.

2. (Original) The oligonucleotide of claim 1, wherein said CpG UNA oligonucleotide binds to an uncleaved CpG island, but not to a CpG island cleaved by a methylation-sensitive restriction enzyme, under stringent hybridization conditions.

3. (Original) The oligonucleotide of claim 1, wherein said oligonucleotide comprises nucleotides G' and C', wherein said nucleotides G' and C' base pair with each other with a stability that is lower than that of G and C.

4. (Original) The oligonucleotide of claim 1, wherein said oligonucleotide comprises nucleotides A' and T', wherein said nucleotides A' and T' base pair with each other with a stability that is lower than that of A and T.

5. (Original) An array of features comprising at least one feature comprising an oligonucleotide of claim 1.

6. (Original) The array of claim 5, wherein said array comprises at least 1000 different CpG UNA oligonucleotide features.

7. (Withdrawn) A method for evaluating methylation of a CpG island, comprising

contacting said CpG island with a methylation-sensitive restriction enzyme to produce a target composition; and

assessing binding of said target composition to a CpG UNA oligonucleotide of claim 1.

8. (Withdrawn) The method of claim 7, wherein said oligonucleotide is a surface-bound oligonucleotide.

9. (Withdrawn) The method of claim 7, wherein said oligonucleotide is bound to a solid support that contains an oligonucleotide array.

10. (Withdrawn) The method of claim 7, wherein the presence of a CpG island that is not cleaved by said methylation-sensitive enzyme indicates that said CpG island is methylated.

11. (Withdrawn) The method of claim 7, wherein said binding is assessed relative to binding of a target composition obtained from a CpG island that has not been contacted with said restriction enzyme or contacted with a methylation insensitive restriction enzyme.

12. (Withdrawn) The method of claim 7, wherein said method further comprises labeling said target composition.

13. (Withdrawn) The method of claim 7, wherein said assessing is done using a non-reduced complexity target composition.

14. (Withdrawn) The method of claim 7, wherein said assessing is done using a reduced complexity target composition.

15. (Withdrawn) A method of comparing methylation of a CpG island in a reference cell and a test cell, comprising:

employing the method of claim 7 to independently evaluate methylation of said CpG island in said reference and test second cells; and

comparing results of said evaluation.

16. (Withdrawn) The method of claim 15, wherein said test cell exhibits a different phenotype as compared to said reference cell.

17. (Withdrawn) The method of claim 16, wherein said phenotype is a cancerous phenotype.

18. (Withdrawn) The method of claim 15, wherein said test cell has been subjected to a different condition to said reference cell.

19. (Withdrawn) The method of claim 15, wherein said reference and test cells are different cells.

20. (Withdrawn) A method of assaying methylation of CpG islands in a sample comprising:

(a) contacting a sample with a methylation sensitive restriction enzyme;

(b) contacting an array according to claim 5 with the composition produced by step (a); and

(c) detecting the presence of any resultant binding complexes on the surface of said array.

21. (Withdrawn) The method according to claim 20, wherein said method is a genome comparison assay.

22. (Withdrawn) A method comprising transmitting data from a method of claim 20 from a first location to a second location.

23. (Withdrawn) The method of claim 22, wherein said second location is a remote location.

24. (Withdrawn) A method comprising receiving a transmitted result of a reading of an array obtained according to the method claim 20.

25. (Original) A kit comprising:
a CpG island unstructured nucleic acid (UNA) oligonucleotide.

26. (Original) The kit of claim 25, wherein said oligonucleotide is a surface-bound oligonucleotide.

27. (Original) The kit of claim 26, wherein said oligonucleotide is present in a feature of an array of oligonucleotide features.

28. (**Currently amended**) The kit of claim 26, further including instructions for performing ~~the methods of claim 7 or 15~~ **a method for evaluating methylation of said CpG island, comprising contacting said CpG island with a methylation-sensitive restriction enzyme to produce a target composition; and assessing binding of said target composition to said CpG UNA oligonucleotide**.

29. (Original) The kit of claim 25, further comprising reagents for labeling samples containing CpG islands.

30. (Withdrawn) A computer-readable medium comprising:
programming for analyzing data produced by the method of claim 15.

31. (Withdrawn) The computer-readable medium of claim 30, wherein an output of said programming is an evaluation of methylation at said CpG island.

32-33. (Cancelled)

34. (**New**) The kit of claim 26, further including instructions for performing a method of comparing methylation of said CpG island in a reference cell and a test cell, comprising: contacting said CpG island with a methylation-sensitive restriction

enzyme to produce a target composition; assessing binding of said target composition to said CpG UNA oligonucleotide to independently evaluate methylation of said CpG island in said reference and said test cells; and comparing results of said evaluation.